

MITIGATION PROSPECTUS
For
Mallard Mitigation, LLC
McElroy Swamp Mitigation Bank

1.0 INTRODUCTION

This mitigation banking prospectus provides background information and a restoration/enhancement strategy for the proposed Mallard Mitigation, LLC's (Sponsor) McElroy Swamp Mitigation Bank (Site) for the Mitigation Bank Review Team (MBRT) to assess the technical feasibility of establishing the mitigation bank and approving its operational goals and objectives. It is the intent of the Sponsor to perform both restoration and enhancement of wetland functions on the site for the purpose of developing mitigation credits that would be available to various individuals, commercial interests and other groups who would be required to compensate for unavoidable impacts to wetlands resulting from permit authorization by the Corps of Engineers pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 and other applicable Federal and State statutes and regulations.

2.0 SITE LOCATION AND DESCRIPTION

The proposed Site consists of approximately 80.6 acres and is located in Section 27, Township 10 South, Range 3 East, Southeastern East of the Mississippi River Land District, Ascension Parish, Louisiana, near the town of Sorrento (see **Figure 1 – Vicinity Map**). Based on historical and current knowledge, the Site supported a mature bottomland hardwood wetland prior to being converted to its current land use. The property is currently used to raise cattle with approximately 58.1 acres in pasture land and 22.8 acres in small scattered wood lots (see **Figure 2 – Existing Site Conditions**).

3.0 WETLAND DELINEATION

A jurisdictional determination has not been approved by the Corps for the Site. However, soil types present, the apparent wetness of the Site and preponderance of hydrophytic vegetation found on the site are indicative of wetlands.

4.0 OWNERSHIP OF PROPERTY

The total acreage of the Site is approximately 80.6 acres which is divided into two equal tracts of land with Lillie T. Jumonville of Sorrento, Louisiana, owning approximately 40.3 acres and Stacey M. Schexnaydre of Sorrento, Louisiana, owning approximately 40.3 acres. Based on the results of a title search on the property, there are no mortgages, liens, right of ways, servitudes, easements, etc., that would prohibit the Site from functioning as a wetlands mitigation bank. Mallard Mitigation, LLC has entered into a purchase agreement with the owners to purchase the

property at a future date pending the execution of an Interagency Agreement between the MBRT and the Sponsor.

5.0 BASELINE CONDITIONS

The following is a description of the baseline conditions at the Site:

5.1 Existing Land Use

The Site is currently used to raise cattle of which approximately 70% is open pastureland and approximately 30% is moderately dense wooded area. The land surrounding the Site is undeveloped wooded areas with the exception of a small rural residential area in the upper northwest corner. Access roads also enter the Site in the upper northwest corner. The tract of land to the west has been cutover in the past 7-10 years.

5.2 Existing Hydrology

The majority of the Site is low, poorly drained with elevations ranging from 2 to 4 feet NAVD. Drainage is generally from west to east with much of the area remaining saturated for extended periods throughout the year. The site drains primarily by sheet flow. The main drainage feature that influences surface water flow is a small drainage swale that runs west to east across the middle section of the Site. The swale ditch terminates near the east side of the Site. However, due to the fact that the surrounding land is very low, the majority of the Site remains saturated and is poorly drained.

5.3 Existing Soils

Based on the Natural Resources Conservation Service (NRCS) Soil Survey of Ascension Parish, the Site consists of approximately 30% Sharkey Clay (Sc), 52% Sharkey Clay, frequently flooded (Sf), and 18% Tunica Clay (Tu). **Figure 3 – Soil Survey of Ascension Parish** shows the location of the three soil types within the area and the following provides a brief description of each type:

Sharkey Clay (Sc) - This poorly drained, very slowly permeable clayey soil is on the lower part of natural levees on the alluvial plain. The representative profile is very dark grayish-brown clay about 9 inches thick, and the underlying material is gray clay. Slopes are less than 1 percent. Natural Fertility is high. Runoff is slow or very slow. Water moves very slowly through this soil. This soil has a high water table perched with a depth of 1 foot from December through April.

Elements of habitat are good for hardwood trees and shrubs, wetland food and cover, and shallow water developments. Important trees consist of green ash, eastern cottonwood, cherrybark oak, sweetgum, water oak, pecan, and American sycamore. Grazing is not recommended.

Sharkey Clay, frequently flooded (Sf) - This poorly drained, very slowly permeable, frequently flooded clayey soil is on the lower part of natural levees on the alluvial plain. The representative profile is very dark grayish-brown clay about 11 inches thick, and the underlying material is dark gray clay. Slopes are less than 0.5 percent. Natural Fertility is high. Runoff is very slow. Water moves very slowly through this soil. The soil is frequently flooded with as much as 1.5 feet of water, mainly in winter, spring, and early summer. This soil has a high water table perched with a depth of 1 foot from December through May.

Elements of habitat are good for hardwood trees and shrubs, wetland food and cover, and shallow water developments. Important trees consist of green ash, eastern cottonwood, cherrybark oak, sweetgum, water oak, pecan, and American sycamore. Grazing is not recommended.

Tunica Clay (Tu) - This poorly drained, very slowly permeable soil is on the lower part of natural levees on the alluvial plain. The representative profile is very dark gray clay about 9 inches thick, and the underlying material is gray and grayish-brown silt loam and very fine sandy loam mottled in shades of brown. Slopes are less than 1 percent. Natural Fertility is high. Runoff is slow or very slow. Water moves very slowly through this soil. This soil has a high water table perched with a depth of 2 feet from December through April.

Elements of habitat are good for hardwood trees and shrubs, wetland food and cover, and shallow water developments. Important trees consist of green ash, eastern cottonwood, cherrybark oak, nuttall oak, and sweetgum. Grazing is not recommended.

The USDA's *Soil Mapping Units and Hydric Soils Designations of Louisiana, 1995*, lists Sc and Sf soil types as hydric soils. Tu soils are not listed as hydric soils.

5.4 Existing Vegetation

The wooded areas consist of primarily water oak (*Quercus nigra*) and hackberry (*Celtis occidentalis*). The water oaks are the dominant trees forming the forest canopy with an average height of 60 feet. The hackberrys are smaller, typically 3 to 6 inches in diameter and 30 to 40 feet tall. There are a few green ash (*Fraxinus pennsylvanica*), drummond red maple (*Acer rubrum drumudi*), tupelo gum (*Nyssa aquatica*), and overcup oak (*Quercus lyrata*). There are a few black willow (*Salix nigra*) present in the very low ponding areas and a few Chinese tallow (*Triadica sebifera*) along the perimeter of the wooded area. The pastureland consists of a grass cover with some palmettos. In the wetter areas approximately 30% of the pastureland is juncus (*Juncus* sp.).

6.0 USGS HYDROLOGIC UNITS

The Site is located in Cataloging Unit 08070202, as depicted on the Hydrologic Unit Map – 1974 for the State of Louisiana. A Cataloging Unit is described as the smallest hydrologic unit, representing part or all of a surface drainage basin, a combination of basins or a distinct hydrologic feature.

7.0 GOALS AND OBJECTIVES

The Site would be restored with the goal of returning natural/historic functions to the former wetland habitat. Replanting native hardwood species in conjunction with hydrologic restoration of the site would re-establish self-sustaining, ecologically important wetland areas on the proposed site. The enhancement of other areas on the site would improve wetland functions already performed by the site. Those targeted functions include wildlife habitat, water quality enhancement, flood attenuation and erosion control.

The reforestation will improve habitat quality for a number of economically and ecologically important wildlife species. Additionally, the large of contiguous wetlands that the site is part of will provide habitat suitable to species that do not survive well in small, isolated wetlands.

The proposed site is located along the upper edges of the McElroy Swamp, a large wetland area that extends along the lower Amite River along the southern shores of Lake Maurepas. From a regional prospective, the restoration of these wetlands would be important in maintaining water quality and providing floodwater storage/attenuation areas downstream of large population centers.

The goal of Mallard Mitigation, LLC in establishing the McElroy Swamp Mitigation Bank is to sale habitat credits derived from the re-establishment of a self-sustaining bottomland hardwood ecosystem which replaces the functions and acreage of wetlands anticipated to be affected within the watershed. This goal is consistent with the need to restore bottomland hardwood wetland habitats in the area due to current and projected future Department of the Army Section 404 permit requests.

8.0 TECHNICAL PLAN FOR MITIGATION ACTIVITIES

The Sponsor proposes to restore approximately 56 acres of previously degraded or former bottomland hardwood wetlands and enhance approximately 24 acres of bottomland hardwood wetlands. Wetlands restoration involves the return of the natural regime, biological conditions and functional integrity to areas which were once viable wetlands. An example of restoration is planting native wetland tree species on lands classified as prior-converted, farmed wetlands or wetland pasture. Generally, wetlands restoration offers the highest rate of success when compared to other habitat credit production methods and is the preferred method in wetlands mitigation banking. Wetlands enhancement is the improvement above baseline conditions of one or more wetland functions to enhance the value of existing degraded wetlands. An example of wetlands enhancement would be clearing willow, tallow, or other undesirable vegetation and planting hard mast species. The following is the Technical Plan for Mitigation Activities for the Site:

8.1 Proposed Land Use

The Sponsor shall execute a Conservation Servitude on the proposed Site. The servitude shall be perpetual and will place restrictions on the future uses which may damage or degrade the wetlands the Site. The Sponsor will grant the servitude to an agency or non-profit conservation organization approved by the MBRT. Also, the cattle currently on the Site will be removed.

8.2 Proposed Hydrology

No hydrologic changes are proposed on the Site at this time. The Site appears to adequately maintain water levels sufficient to support wetland functions. If future needs arise, although not anticipated at this time, the Site hydrology shall be modified to meet such needs.

8.3 Proposed Vegetation

Prior to planting, the Site will be prepared as needed to facilitate planting. To the maximum extent practicable ruts shall be removed in order to restore natural surface contours. Resultant ground elevations will be appropriate for the establishment and maintenance of wetland vegetation.

To assure sufficient seedlings, the trees-per-acre requirement has been increased to 9-foot centers. This will result in an initial density of approximately 538 trees per acre. Species will be variously distributed to avoid homogeneous stands and give a more natural appearance.

Tree Species Composition: Considered historical pre-settlement forests in the lower Amite River watershed has a hard to soft mast ratio of 40/60, a hard mast component of 50 percent will be targeted. Realizing that soft mast will naturally establish itself to some extent (mostly within the first 200 yards of the seed wall), a greater percentage of hard mast to soft mast will be planted initially. However, monitoring efforts indicate that hard mast has a higher survival rate than planted soft mast, so an initial planting ration of hard to soft mast of 60/40 is proposed. The following list and specified percentages of hard and soft mast dominants and co-dominants trees would be acceptable for the Bank.

Overcup oak (*Quercus lyrata*)
Nuttall oak (*Quercus nuttallii*)
Bitter pecan (*Carya aquatica*)
Green ash (*Fraxinus pennsylvanica*)
Drummond red maple (*Acer rubrum*)
Persimmon (*Diospyros virginiana*)
Baldcypress (*Taxodium*)
Water tupelo (*Nyssa aquatica*)

To the extent possible, one to two year old seedlings grown from locally acquired seed will be used. Seedlings will be stored and handled appropriately and will be planted during the planting season (December 15 to March 15).

Competing vegetation in the immediate vicinity of seedlings will be controlled, as needed, using chemical and/or mechanical means, for the first two years following planting.

Chemical and/or mechanical control of invading noxious tree species, such as Chinese tallow and black willow shall be undertaken on an ongoing basis after planting but may be discontinued when the planted community reaches an appropriate stage of development.

8.4 Survival

At one year, a 50% survival rate would mean a density of approximately 266 planted seedlings per acre. The overall ratio of hard-mast to soft-mast producing species should be comparable to the initially targeted ratio as stated above.

For a given planting, a minimum of 300 seedlings per acre must survive through the end of the fourth year (i.e., Year 5) following successful attainment of the one-year survivorship criteria. Trees established through natural recruitment may be included in this tally; however, a range of 120 to 135 hard mast-producing seedlings per acre must be present.

If the above survival is not attained, all dead and missing seedlings shall be replaced during the next non-growing season. Re-plantings shall continue until the survival criteria are met or the interagency review team determines that the plantings should be discontinued and the mitigation area closed.

9.0 PERFORMANCE STANDARDS

The interagency MBRT will preliminarily determine if the Site and the proposed wetland restoration and/or enhancement plan would be acceptable as a mitigation bank. If the Site is determined to be acceptable, the Sponsor and the MBRT will develop an interagency agreement or banking instrument for the Site. Included in the interagency agreement, performance standards will be developed and used to verify the success of the mitigation effort and will also be used to determine credit availability and the need for remedial action.

10.0 LONG-TERM MANAGEMENT AND PROTECTION

The Sponsor will be responsible for monitoring the survival of the seedlings and attainment of other success criteria on a yearly basis. Yearly monitoring will require documenting the number and species of surviving seedlings and general condition of the mitigation bank or area as well as the condition of applicable plugs and water control structures. Initial monitoring will sample at least 5 percent of the planted tract.

Upon attainment of the year 4 survival rate, the sponsor will monitor at 5-year intervals. Long-term monitoring will generally be conducted by establishing permanent sample plots within the mitigation area or bank and recording the growth of planted trees, the development of the vegetative community as well as the overall condition of the mitigation area or bank and

condition of applicable earthen plugs or structures. The number and size of the sampling plots will be determined by the MBRT but will be representative of the entire area.

Timber harvesting for ecological purposes may be allowed if accomplished in accordance with a timber management plan approved by the MBRT. The Sponsor will be required to perform a post-harvest survey.

The Sponsor will provide reports containing monitoring data to CEMVN and other review team members after each monitoring event. The Sponsor will also provide annual reports documenting use of the bank or area (i.e., individual debits, account balances, acres planted in a given year, acreage available to plant, etc.).

All other requirements for establishing a mitigation bank or area will apply, including the protection of the mitigation site with a conservation easement and the establishment of financial assurances to guarantee implementation, management, maintenance and monitoring.

11.0 FINANCIAL ASSURANCES

Financial assurance will be an escrow account approved by MBRT. It will be held in a federally insured depository. Specified percentage of this assurance may be released back to the Sponsor in accordance with the achievement of milestones specified in the banking instrument. The value of the escrow account will be determined during development of the banking instrument.

12.0 PERMIT APPLICATION

An application for a Nationwide Permit 27 will be made to allow for work required to restore site hydrology, replant the pastureland and enhancement activity in the wooded area.

13.0 CONCLUSIONS

This 80.6 acre Site consists of 58.1 acres of pastureland and 22.5 acres of woodlands. The NRCS soils maps indicate approximately 85% of the Site has hydric soils. Currently the Site is used for cattle.

The proposed wetland mitigation is for restoration of bottomland hardwoods on the pastureland and enhancement of the existing woodlands. Planting of bottomland hardwoods will follow the MBRT recommendations. The natural hydrology of the Site has not been altered, therefore, regarding or filling the drainage ditch will not be required. The Site will be actively managed to achieve the best possible wetland and wildlife habitat.



Figure 1: Vicinity Map



Figure 2

SOIL SURVEY OF ASCENSION PARISH, LOUISIANA

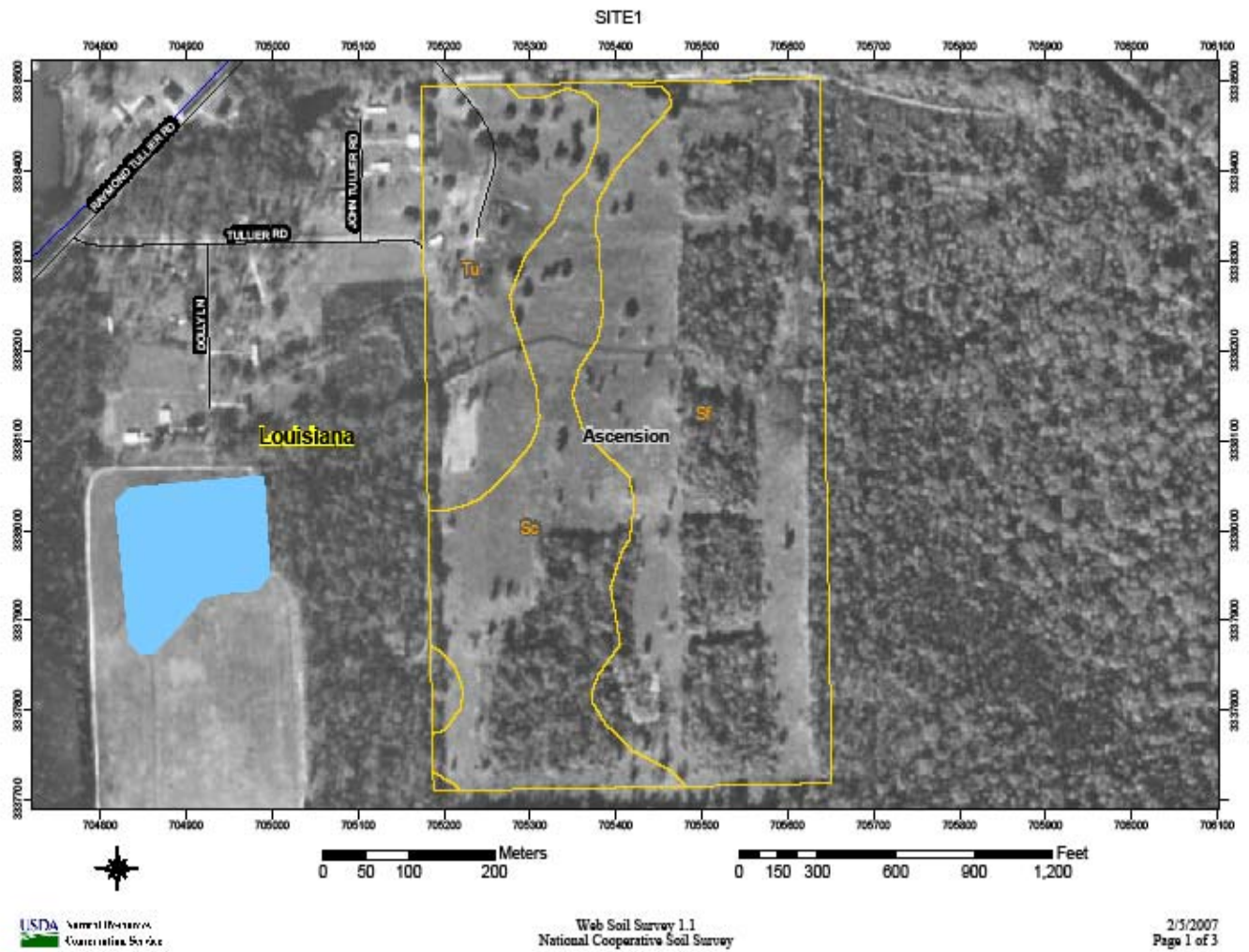


Figure 3